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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/885,642	06/20/2001	Darrell W. Kelsoe		4543

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GREGORY M. FRIEDLANDER & ASSOCIATES, P.C.
11 SOUTH FLORIDA STREET
MOBILE, AL 36606-1934

EXAMINER

CAMERON, ERMA C

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 04/17/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/885,642

Applicant(s)

KELSOE, DARRELL W.

Examiner

Erma C. Cameron

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 46-71 is/are pending in the application.
- 4a) Of the above claim(s) 58, 64, 69 and 71 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 46-57, 59-63, 65-68 and 70 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: _____

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Election/Restrictions

1. Claims drawn to nonelected species are withdrawn from further consideration pursuant to 37 CFR 1.142(b). Applicant timely traversed the restriction (election) requirement in Paper No. 4, filed 3/5/2002.

2. Applicant's election with traverse in Paper No. 4 is acknowledged. The traversal is on the ground(s) that it would not be a burden to the PTO to search for both $R_3 XaXb$ (not originally elected) and $RXaXb_3$ (originally elected). This is not found persuasive because the examiner believes that a search for additional species would be a burden.

The requirement is still deemed proper and is therefore made FINAL.

3. Newly submitted claims 58 and 69, drawn to $(CH_3)_3SiCl$, and 64 and 71, drawn to R_2SiX_2 , are directed to species that are independent or distinct from the invention originally claimed for the following reasons: the applicant elected methyltrichlorosilane. Claims 58, 64, 69 and 71 claim compounds other than these.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 58, 64, 69 and 71 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

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Claim Rejections - 35 USC § 112

4. Claims 46-57, 59-63, 65-68 and 70 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The examiner cannot find where in the specification or claims as originally filed there is a description of exothermically reacting said one or more molecules with said wood cellulose (Claim 46 and 65). In addition, the examiner cannot find where in the specification or claims as originally filed there is language as now appears in the independent claims: “one or more molecules are crosslinked to the wood cellulose” (Claims 46 and 65).

These descriptions appear to be new matter.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 46-53, 55-57, 61, 63 and 65-68 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Saka et al (5652026).

'026 teaches impregnating moisture conditioned (4:62) wood, using vacuum or pressure (4:61-68), with a methyltrialkoxysilane, a trialkyl borate (4:35) such as trimethyl borate (see example 2), acid or base catalysts or a catalyst that can produce an acid such as metal organic acid salt (5:1-15), after which it is cured with heat (see the examples). Both solvents such as acetone (BP=56 degrees C) and water (see Example 1) are used to form an impregnating solution (4:44-49). The wood is made flame retardant, and the silicon material is fixed within the wood, and is not leachable (see Abstract). The property of exothermically reacting with the wood and reacting with the hydroxyl groups of the cellulose would be inherent to the compounds used. The boron-containing siloxane oligomers can be produced by hydrolyzing alkoxysilanes and trialkyl borates (4:29-43) and may be further hydrolyzed within the wood (3:20-36).

7. Claims 46 and 59 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by PL 148704.

'704 teaches treating wood with methyltrichlorosilane in an organic solvent such as toluene (see Abstract). The property of exothermically reacting with the hydroxyl groups of the wood is inherent to the methyltrichlorosilane.

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8. Claims 46-49, 61 and 65-66 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Nasheri (5871817).

'817 teaches treating wood with a methanol or ethanol (solvents with a BP<100) solution of trimethylborate (see the examples).

The property of exothermically reacting with the hydroxyl groups of the wood is inherent to the trimethylborate.

9. Claims 46, 59, 61, 65 and 70 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Stabnikov (Derevoobrabatyvayushchaya Prom., 8(10), pp 7-8, 1959).

Stabnikov teaches immersing wood in a 5-10% methyltrichlorosilane solution in gasoline (BP presumed to be less than 100 degrees C) (pp 6 and 7).

The property of reacting exothermically with the hydroxyl groups of the wood is inherent to the methyltrichlorosilane.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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11. Claims 54, 60 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saka et al (5652026).

'026 is applied here for the reasons given above.

'026 fails to teach the concentrations of the acid or agents in solution or in the wood.

It would have been obvious to one of ordinary skill in the art to have optimized known important parameters such as the % of each ingredient, in solution or in the wood, because the amount of the treating materials is known to affect the properties of the wood after the wood is treated.

12. Claims 60 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nasheri (5871817).

'817 is applied here for the reasons given above.

'817 teaches the solution in terms of BAE (4:8), which makes it difficult to compare to applicants's claimed solution conc. But because the % boric acid gained is in the same range as applicant's claimed range, the starting solutions are expected to be in the same range.

'817 teaches that the wood gains ~ 1% boric acid (see the examples), which overlaps with applicant's claimed range.

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13. Claim 62 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Stabnikov (Derevoobrabatyvayushchaya Prom., 8(10), pp 7-8, 1959).

Stabnikov is applied here for the reasons given above.

The % conc of solution overlaps with that claimed by the applicant.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


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16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erma C. Cameron whose telephone number is 703-308-2330.

The examiner can normally be reached on 8:30-6:00, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on 703-308-2333. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7718 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


ERMA CAMERON
PRIMARY EXAMINER

Erma C. Cameron
Primary Examiner
Art Unit 1762

April 12, 2002.